

ITS 413 – QUIZ 2 ANSWERS

First name: _____ Last name: _____

ID: _____

Total Marks: _____

out of 10

Question 1 [1 mark each]

- | | | |
|--|-------------|--------------|
| a) Every company with their own IP address (or range of addresses) has an Autonomous System (AS) number. | True | False |
| b) An Interior Gateway Protocol is used for routing between Autonomous Systems. | True | False |
| c) An Interior Gateway Protocol is used for routing within an Autonomous System. | True | False |
| d) There are many different types of Exterior Gateway Protocols in use today. | True | False |
| e) Border Gateway Protocol is used for routing inside an Autonomous System. | True | False |
| f) An Autonomous System may contain multiple IP subnets. | True | False |
| g) An Autonomous System contains a single IP subnet. | True | False |
| h) When referring to agreements between ISPs, an ISP must always pay another ISP for transporting their traffic. | True | False |
| i) When referring to the physical connection between networks, Private Peering means one network operator (e.g. ISP) must pay the other. | True | False |
| j) A transit agreement between ISPs means one ISP will pay the other ISP for traffic transferred between the two networks. | True | False |
| k) A transit agreement between ISPs means the two ISPs have agreed to exchange traffic for free. | True | False |
| l) A Tier-1 ISP enters peer agreements with all other Tier-1 ISPs. | True | False |
| m) CAT and TOT (two ISPs in Thailand) are considered Tier-1 ISPs. | True | False |
| n) A peering agreement between ISPs means the two ISPs have agreed to exchange their traffic freely. | True | False |
| o) IEEE 802.11 uses the same MAC protocol as IEEE 802.3. | True | False |
| p) IEEE 802.11 has several different physical layer protocols. | True | False |
| q) IP routers typically have more than one network interface. | True | False |
| r) IP must be implemented in all hosts, routers and switches connected to the Internet. | | True |

False

- | | | |
|---|-------------|--------------|
| s) IP must be implemented in all hosts and routers connected to the Internet. | True | False |
| t) IP hosts do not forward IP datagrams. | True | False |
| u) IP implements a retransmission scheme to ensure reliability. | True | False |
| v) IP hosts do forward IP datagrams. | True | False |

Question [3 marks]

A network has three wireless LAN basic service sets, with two clients in each set. The extended service set is connected via a single Ethernet switch. This switch also connects to a fixed router A. Router A connects via a PDH link to another router B. Router B connects to a host via Ethernet.

- Draw the complete network, labelling all nodes (devices) in the network and showing connections between nodes. [2 marks]
- If IP is used in this network, how many IP subnets exist. Show them on your diagram. [1 mark]

3 IP subnets. Routers connect IP subnets together.

